

<!--StartFragment-->RESULT 1

AAR92216

ID AAR92216 standard; protein; 116 AA.

XX

AC AAR92216;

XX

DT 15-JUN-2007 (revised)

DT 28-MAY-1996 (first entry)

XX

DE LL2 MAb VH region.

XX

KW Humanised antibody; monoclonal antibody; MAb; LL2; B-cell lymphoma;

KW leukaemia; therapy; diagnosis; complementarity determining region; CDR;

KW antibody engineering; BOND\_PC;

KW chimeric anti-B cell lymphoma IgG2a heavy chain variable region;

KW chimeric anti-B cell lymphoma IgG2a heavy chain variable region [Mus sp.].

XX

OS Mus musculus.

XX

FH	Key	Location/Qualifiers
----	-----	---------------------

FT	Region	31. .35
----	--------	---------

FT		/label= CDR1
----	--	--------------

FT		/note= "claim 9, page 44"
----	--	---------------------------

FT	Region	50. .66
----	--------	---------

FT		/label= CDR2
----	--	--------------

FT		/note= "claim 10, page 45"
----	--	----------------------------

FT	Region	99. .105
----	--------	----------

FT		/label= CDR3
----	--	--------------

FT		/note= "claim 11, page 45"
----	--	----------------------------

XX

PN WO9604925-A1.

XX

PD 22-FEB-1996.

XX

PF 11-AUG-1995; 95WO-US009641.

XX

PR 12-AUG-1994; 94US-00289576.

XX

PA (IMMU-) IMMUNOMEDICS INC.

XX

PI Leung S, Hansen H;

XX

DR WPI; 1996-139454/14.

DR N-PSDB; AAT15802.

DR PC:NCBI; gi998424.

XX

PT Chimeric and humanised LL2 antibodies - used to produce conjugates for  
PT the therapy and diagnosis of B-cell lymphoma(s) and leukaemia(s).

XX

PS Claim 5; Page 36-37; 70pp; English.

XX

CC The complementarity determining regions (CDRs) of mouse monoclonal  
CC antibody (MAb) LL2 VK (AAR92215) and VH (AAR92216) regions were

CC recombinantly linked to the framework sequences of human VK and VH

CC regions, respectively, to give humanised LL2 VK (AAR92217) and VH

CC (AAR92218). These were subsequently linked, respectively, to human kappa

CC and IgG1 constant regions. A humanised MAb was obtd. that retained the B-

CC lymphoma and leukaemia cell targeting and internalisation characteristics

CC of the parental LL2 MAb, and which exhibited a lowered HAMA reaction. It

CC can be linked to e.g. a cytostatic agent for therapeutic appln

CC

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed  
CC information from BOND.  
XX  
SQ Sequence 116 AA;

Query Match 100.0%; Score 620; DB 2; Length 116;  
Best Local Similarity 100.0%; Pred. No. 2.1e-42;  
Matches 116; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QVQLQESGAELSKPGASVKMSCKASGYTFTSYWLHWIKQRPQGQLEWIGYINPRNDYTEY 60  
|  
Db 1 QVQLQESGAELSKPGASVKMSCKASGYTFTSYWLHWIKQRPQGQLEWIGYINPRNDYTEY 60

Qy 61 NQNFKDKATLTADKSSSTAYMQLSSLTSEDSAVYYCARRDITTFYWGQGTTLTVSS 116  
|  
Db 61 NQNFKDKATLTADKSSSTAYMQLSSLTSEDSAVYYCARRDITTFYWGQGTTLTVSS 116

<!--EndFragment-->

&lt;!--StartFragment--&gt;RESULT 2

AAR92215

ID AAR92215 standard; protein; 113 AA.

XX

AC AAR92215;

XX

DT 15-JUN-2007 (revised)

DT 28-MAY-1996 (first entry)

XX

DE LL2 MAb VK region.

XX

KW Humanised antibody; monoclonal antibody; MAb; LL2; B-cell lymphoma;

KW leukaemia; therapy; diagnosis; complementarity determining region; CDR;

KW antibody engineering; BOND\_PC;

KW chimeric anti-B cell lymphoma IgG2a kappa variable region; LL2 VK.

XX

OS Mus musculus.

XX

FH Key Location/Qualifiers

FT Region 24. .40

FT /label= CDR1

FT /note= "claim 6, page 44"

FT Region 56. .62

FT /label= CDR2

FT /note= "claim 7, page 44"

FT Region 95. .103

FT /label= CDR3

FT /note= "claim 8, page 44"

XX

PN WO9604925-A1.

XX

PD 22-FEB-1996.

XX

PF 11-AUG-1995; 95WO-US009641.

XX

PR 12-AUG-1994; 94US-00289576.

XX

PA (IMMU-) IMMUNOMEDICS INC.

XX

PI Leung S, Hansen H;

XX

DR WPI; 1996-139454/14.

DR N-PSDB; AAT15802.

DR PC:NCBI; gi998422.

XX

PT Chimeric and humanised LL2 antibodies - used to produce conjugates for

PT the therapy and diagnosis of B-cell lymphoma(s) and leukaemia(s).

XX

PS Claim 5; Page 35-36; 70pp; English.

XX

CC The complementarity determining regions (CDRs) of mouse monoclonal

CC antibody (MAb) LL2 VK (AAR92215) and VH (AAR92216) regions were

CC recombinantly linked to the framework sequences of human VK and VH

CC regions, respectively, to give humanised LL2 VK (AAR92217) and VH

CC (AAR92218). These were subsequently linked, respectively, to human kappa

CC and IgG1 constant regions. A humanised MAb was obtd. that retained the B-

CC lymphoma and leukaemia cell targeting and internalisation characteristics

CC of the parental LL2 MAb, and which exhibited a lowered HAMA reaction. It

CC can be linked to e.g. a cytostatic agent for therapeutic appln

CC

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed

CC information from BOND.

XX

SQ Sequence 113 AA;

Query Match 100.0%; Score 589; DB 2; Length 113;

Best Local Similarity 100.0%; Pred. No. 4.7e-40;

Matches 112; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 DIQLTQSPSSLAVSAGENVTMSCKSSQSVLYSANHKNYLAWYQQKPGQSPKLLIYWASTR 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 DIQLTQSPSSLAVSAGENVTMSCKSSQSVLYSANHKNYLAWYQQKPGQSPKLLIYWASTR 60
```

```
Qy      61 ESGVPDRFTGSGSGTDFTLTISRQVEDLAIYYCHQYLSSWTFGGGTKLEIK 112
          ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ESGVPDRFTGSGSGTDFTLTISRQVEDLAIYYCHQYLSSWTFGGGTKLEIK 112
```

<!--EndFragment-->

&lt;!--StartFragment--&gt;RESULT 8

AAW66099

ID AAW66099 standard; protein; 123 AA.

XX

AC AAW66099;

XX

DT 10-DEC-1998 (first entry)

XX

DE anti-CD22 monoclonal antibody heavy chain variable region.

XX

KW anti-CD22 monoclonal antibody heavy chain variable region; VL;

KW Pseudomonas exotoxin; variable heavy chain; VH; variable light chain;

KW malignant B-cell; immunodiagnosis; RFB4 IgG.

XX

OS Mammalia.

XX

FH Key Location/Qualifiers

FT Misc-difference 121

FT /note= "Encoded by gtc"

XX

PN WO9841641-A1.

XX

PD 24-SEP-1998.

XX

PF 19-MAR-1998; 98WO-US005453.

XX

PR 20-MAR-1997; 97US-0041437P.

XX

PA (USSH ) US DEPT HEALTH &amp; HUMAN SERVICES.

XX

PI Fitzgerald D, Pastan I, Mansfield E, Kreitman R;

XX

DR WPI; 1998-521227/44.

DR N-PSDB; AAV07642.

XX

PT Recombinant anti-CD22 antibodies and immuno-conjugates - of antibodies

PT linked to a therapeutic agent, e.g. Pseudomonas exotoxin or a label; for

PT inhibiting malignant B-cells.

XX

PS Claim 6; Fig 1; 71pp; English.

XX

CC The invention claims for a recombinant immunoconjugate comprising of a

CC therapeutic agent (e.g Pseudomonas exotoxin) or a detectable label

CC peptide bonded to a recombinant anti-CD22 antibody (RFB4 IgG) having the

CC present variable heavy (VH) chain with a cysteine residue at amino acid

CC 44 and a variable light (VL; AAW66098) chain with a cysteine residue at

CC amino acid 100. The immunoconjugate is claimed to inhibit the growth of

CC malignant B-cells in vivo, such as rodent, canine or primate B-cells. The

CC anti-CD22 antibody is claimed useful for detecting CD22 protein in a

CC sample or in vivo in a mammal, and can be used in diagnostic kits

XX

SQ Sequence 123 AA;

Query Match 99.4%; Score 644; DB 2; Length 123;

Best Local Similarity 99.2%; Pred. No. 4.3e-52;

Matches 122; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 EVQLVESGGGLVKPGGSLKLSAASGFAFSIYDMSWVRQTPEKRLEWVAYISSGGGTTY 60

|||||

Db 1 EVQLVESGGGLVKPGGSLKLSAASGFAFSIYDMSWVRQTPEKRLEWVAYISSGGGTTY 60

```
Qy      61 PDTVKG RFTISRDN AKNTLYLQMSSLKSEDTAMYYCARHSGYGSSYGVL FAYWGQGT LVT 120
          |||
Db      61 PDTVKG RFTISRDN AKNTLYLQMSSLKSEDTAMYYCARHSGYGSSYGVL FAYWGQGT LVT 120

Qy      121 VSA 123
          ||
Db      121 TSA 123
<!--EndFragment-->
```

```

<!--StartFragment-->RESULT 3
AAW66098
ID  AAW66098 standard; protein; 107 AA.
XX
AC  AAW66098;
XX
DT  10-DEC-1998 (first entry)
XX
DE  anti-CD22 monoclonal antibody light chain variable region.
XX
KW  anti-CD22 monoclonal antibody light chain variable region; VL;
KW  Pseudomonas exotoxin; variable heavy chain; VH; variable light chain;
KW  malignant B-cell; immunodiagnosis; RFB4 IgG.
XX
OS  Mammalia.
XX
PN  WO9841641-A1.
XX
PD  24-SEP-1998.
XX
PF  19-MAR-1998; 98WO-US005453.
XX
PR  20-MAR-1997; 97US-0041437P.
XX
PA  (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI  Fitzgerald D, Pastan I, Mansfield E, Kreitman R;
XX
DR  WPI; 1998-521227/44.
DR  N-PSDB; AAV07641.
XX
PT  Recombinant anti-CD22 antibodies and immuno-conjugates - of antibodies
PT  linked to a therapeutic agent, e.g. Pseudomonas exotoxin or a label; for
PT  inhibiting malignant B-cells.
XX
PS  Claim 6; Fig 1; 71pp; English.
XX
CC  The invention claims for a recombinant immunoconjugate comprising of a
CC  therapeutic agent (e.g Pseudomonas exotoxin) or a detectable label
CC  peptide bonded to a recombinant anti-CD22 antibody (RFB4 IgG) having a
CC  variable heavy (VH; AAW66099) chain with a cysteine residue at amino acid
CC  44 and the present variable light (VL) chain with a cysteine residue at
CC  amino acid 100. The immunoconjugate is claimed to inhibit the growth of
CC  malignant B-cells in vivo, such as rodent, canine or primate B-cells. The
CC  anti-CD22 antibody is claimed useful for detecting CD22 protein in a
CC  sample or in vivo in a mammal, and can be used in diagnostic kits
XX
SQ  Sequence 107 AA;

Query Match          99.5%; Score 559; DB 2; Length 107;
Best Local Similarity 99.1%; Pred. No. 7.4e-34;
Matches 106; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy      1 DIQMTQTTSSLSASLGDRVTISCRASQDISNYLNWYQQKPDGTVKLLIYYTSILHSGVPS 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 DIQMTQTTSSLSASLGDRVTISCRASQDISNYLNWYQQKPDGTVKLLIYYTSILHSGVPS 60

Qy      61 KFSGSGSGTDYSLTISNLEQEDFATYFCQQGNTLPWTFGGGTKLEIK 107
        :||||||||||||||||||||||||||||||||||||||||||
Db      61 RFSGSGSGTDYSLTISNLEQEDFATYFCQQGNTLPWTFGGGTKLEIK 107
<!--EndFragment-->

```